

Bob Stewart
File

STATE OF MISSOURI
DEPARTMENT OF NATURAL RESOURCES

Mel Carnahan, Governor • David A. Shott, Director
DIVISION OF ENVIRONMENTAL QUALITY
P.O. Box 176 Jefferson City, MO 65102-0176

October 8, 1997

CERTIFIED MAIL - P 102 318 552
RETURN RECEIPT REQUESTED

Mr. Joseph Haake
McDonnell Douglas, St. Louis
Materials Services
P.O. Box 516, Department 64C
Mail Code 1003377
St. Louis, MO 63166-0516

RE: Resource Conservation and Recovery Act (RCRA) Facility
Investigation Work Plan Comments; McDonnell Douglas
Aerospace Tract I Facility; St. Louis, Missouri
Permit Number: MOD 000 818 963

Dear Mr. Haake:

The Missouri Department of Natural Resources' (MDNR) Hazardous Waste Program (HWP), in coordination with the U.S. Environmental Protection Agency Region VII, has completed review of the RCRA Facility Investigation Work Plan (RFI WP) dated May 29, 1997, for the Tract I facility located in Hazelwood, Missouri. The RFI WP was submitted pursuant to Corrective Action Condition V. of the Missouri Hazardous Waste Management Facility Permit reissued to McDonnell Douglas (MCD) on March 5, 1997. Following review of the MCD RFI WP and comparison with RFI WP development guidance, the HWP finds the work plan unsatisfactory in accordance with the following items:

Solid Waste Management Unit (SWMU) #17, Transfer Area
for Recovered PCE, Section 3.5.1.4 Sample Collection Plan,
page 20:

This section describes sampling methodology and soil boring locations for SWMU #17, Transfer Area for Recovered PCE. MCD proposes three geoprobe borings to a depth of six feet around the perimeter of the unit, collecting two discrete

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samples from each soil boring as based upon field screening criteria and observations. The HWP concurs with this approach for collecting representative data for determining the presence and horizontal extent of contamination from the unit. However, MCD proposes no sample locations within the boundary of the unit and instead references data collected during the RCRA Facility Assessment (RFA) Sampling Visit (SV). While the HWP does not wish to duplicate work previously done, the samples taken during the SV extended in depth to only 24 inches.

In order to begin to determine the vertical extent of contamination, MCD is required to propose a sample location within the boundary of SWMU #17 where, based upon field observations and unit history, a likely point source release could have occurred to the subsurface. MCD should also apply the same "stepping out" field screening criteria in which the horizontal extent of contamination is anticipated to be determined in the field. In addition, given the shallow depth to the first encountered groundwater and the confirmed presence of contaminants during the RFA SV, MCD is required to propose the collection of a groundwater sample from the previously discussed sample location. The groundwater should be analyzed for Volatile Organic Compounds (VOCs) and RCRA total metals (8) [Arsenic, Barium, Cadmium, Chromium, Lead, Mercury, Selenium, and Silver].

If no groundwater is encountered at the expected interval as discussed in the work plan, a reasonable depth criterion should be proposed within the RFI WP to terminate the boring and collect no groundwater sample. Any decision not to collect a groundwater sample should be supported by field screening data in addition to the depth termination criterion in the work plan. However, it should be made clear to MCD that, if the presence of contaminants from the deepest discrete soil sample interval is detected, the vertical extent of contamination would not be fully defined and could therefore require further field work as part of a Phase II RFI.

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- SWMU # 21, Industrial Wastewater Treatment Plant (IWTP)
Area, Section 3.5.2.5 Sample Collection Plan, page 21:

This section describes sampling methodology and soil boring locations for SWMU #21, IWTP Area. MCD proposes six geoprobe borings to a depth of 25 feet around the perimeter of the unit, collecting two discrete samples from each soil boring with selection based upon field screening criteria. The HWP concurs with MCD's selection of field screening criteria, including the use of a Photo Ionization Detector (PID) to trigger soil sampling and VOC analysis. However, MCD only proposes the 1-2 foot zone below land surface (bls) and 24-25 foot zone bls as the standard collection depths for the soil borings if field screening data fails to indicate a different preferential sample depth. In an effort to better assess potential decreasing horizontal and vertical contaminant trends, the HWP requests that the three soil borings located adjacent to the settling and equalization tanks (as shown in Figure 3-2) have three samples collected from them as the standard instead of two. Given that the tank invert depths are 20 feet bls, an additional standard collection point of approximately 15-17 foot bls zone appears appropriate. The three soil borings in which this additional sample location is requested are: (1) the soil boring located in the southwest lot corner; (2) the soil boring located along the southeast lot corner; and (3) the soil boring located immediately north of the settling and equalization tanks.

In addition, given that perched groundwater data was collected during the RFA SV (in which elevated metal concentrations were detected), at least one groundwater sample is required to be proposed by MCD for this unit. This groundwater sample should be analyzed for both total and filtered RCRA metals (8) analysis. In an effort to address this requirement, it is anticipated that one of the six soil borings locations would be advanced to perched zones of saturation; however, as noted during the RFA SV activities, the presence, depth, and recharge rate of any perched groundwater zone is uncertain. Therefore, MCD should propose within the RFI WP which soil boring location this groundwater sample will be selected from and alternatives if groundwater is not detected or recharge

rates preclude the collection of a sufficient volume of water. It should be noted that this sample location is expected to be representative of down gradient groundwater flow from the equalization tanks.

- SWMU #26, Former Less-than-90-Day Storage Building, Section 3.5.3.1 Sample Collection Plan, page 25:

This section describes sampling methodology and soil boring locations for SWMU #26, Former Less-than-90-Day Storage Building. MCD proposes three geoprobe borings to a depth of six feet around the perimeter of the unit, collecting two discrete samples from each soil boring with selection depths based upon field screening criteria. As stated within previous comments, the HWP concurs with this approach for collecting representative data for determining the presence of contamination and horizontal extent laterally from the unit. In previous sampling at this unit during the RFA SV, field screening composed of PID and combustible gas indicator data indicated the potential presence of subsurface soil gas. It is noted within both the RFA and the RFI WP that no contaminants were detected in soil samples at this unit during the RFA SV. However, as discussed in previous HWP comment letters, given the nature of and potential for lateral migration of contaminants in the form of soil gas and/or dissolved phase in groundwater, there exists the possibility of a soil gas or groundwater plume at or near this unit. Therefore, MCD is required to propose the collection of one groundwater sample from beneath this unit in the RFI WP in an effort to confirm the lack of contamination. The groundwater should be analyzed for VOCs and total RCRA metals (8).

- As a function of addressing the above comments, summarized changes will be required within, at a minimum, Sections 2.6, 3.5.6, 3.6, specific subsections of 4.0, 5.5; respective tables and figures referenced within SWMU assessment sections; and associated items within the Quality Assurance Project Plan (Appendix A) and potentially the Health & Safety Plan (Appendix B).

MCD is required to adequately address the foregoing comments via submittal of three copies of a revised RFI WP within 30 days of

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receipt of this letter. Upon receipt of the revised RFI WP, the HWP will review and provide written acknowledgment of the findings of the second review, including the anticipated approval of the RFI WP if all comments are satisfactorily addressed. MCD is strongly encouraged to contact the HWP if any questions should arise during revision of the RFI WP to ensure that MCD's response to comments is satisfactory.

If you have any questions concerning this letter or other aspects of corrective action, please do not hesitate to contact me at (573) 751-3553.

Sincerely,

HAZARDOUS WASTE PROGRAM



Aaron Schmidt, P.E.
Environmental Engineer

AS:asj

c: Robert L. Stewart, P.E., U.S. EPA Region VII ✓
MDNR, St. Louis Regional Office